



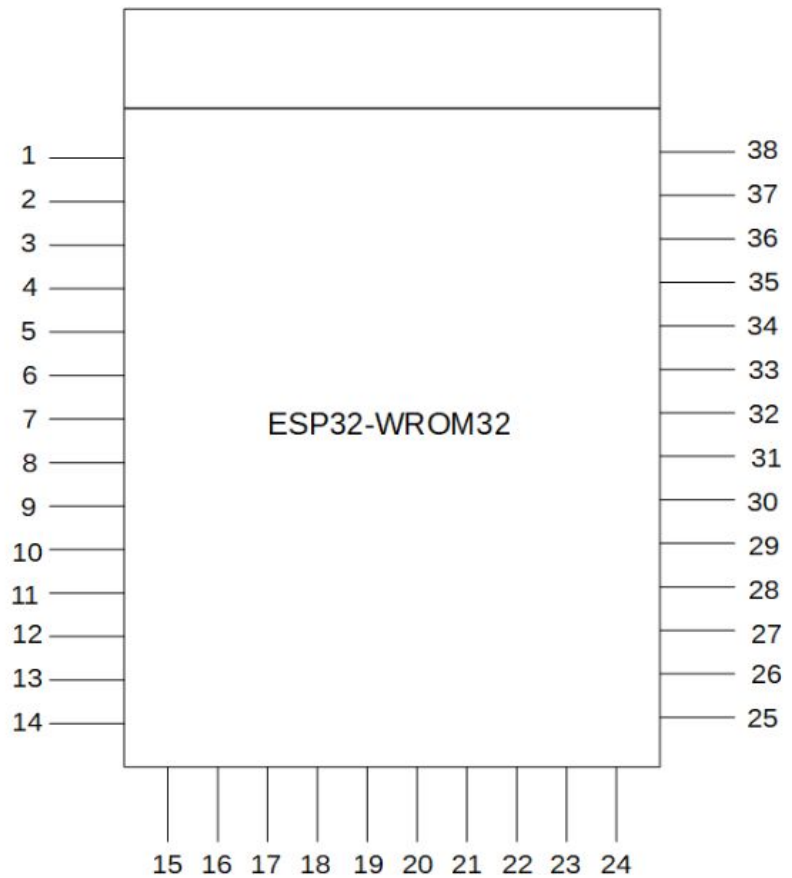
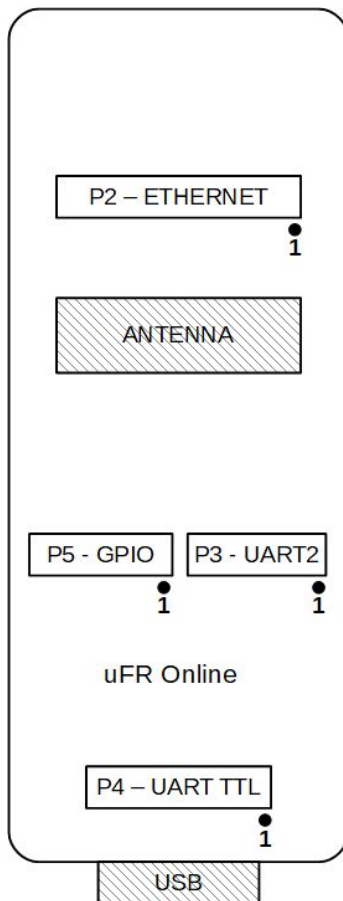
uFR Online pins and connectors description

Version 1.0

Table of contents

| | |
|--|----------|
| Connectors location and ESP32 pinout | 3 |
| Available pins | 4 |
| User programmable pins | 5 |
| Input/Output pins additional features | 6 |
| Non-programmable pins | 7 |
| Revision history | 8 |

Connectors location and ESP32 pinout



Available pins

In table below is shown list of available pins on uFR Online.

| User available uFR Online pins | | |
|--------------------------------|--------|------------------------------------|
| ESP32 Pin number | GPIO | Description |
| 4 | GPIO36 | External input pin 1 |
| 5 | GPIO39 | External input pin 2 |
| 6 | GPIO34 | Connected to uFR reader TX |
| 7 | GPIO35 | Connected to external UART TX |
| 8 | GPIO32 | Connected to uFR reader reset |
| 9 | GPIO33 | External input/output pin 3 |
| 13 | GPIO13 | Connected to internal RGB LED |
| 24 | GPIO2 | External output pin 6 |
| 27 | GPIO16 | Connected to uFR reader RX |
| 29 | GPIO5 | External input/output pin 4 |
| 30 | GPIO18 | External input/output pin 5 |
| 34 | GPIO3 | Connected to Serial to USB FTDI RX |
| 35 | GPIO1 | Connected to Serial to USB FTDI TX |
| 37 | GPIO23 | Connected to external UART RX |

User programmable pins

In table below is shown list of user programmable pins on OEM unlocked uFR Online.

| UART 1 - Internally connected to uFR Reader | | |
|---|--------|-------------------------------|
| ESP32 Pin number | GPIO | Description |
| 6 | GPIO34 | Connected to uFR Reader TX |
| 8 | GPIO32 | Connected to uFR Reader reset |
| 27 | GPIO16 | Connected to uFR reader RX |

| UART 2 - connected external P3 connector | | | |
|--|------------------|--------|--------------------------------|
| P3 Pin number | ESP32 Pin number | GPIO | Description |
| 1 | X | X | Connected to 3.3V power supply |
| 2 | 7 | GPIO35 | Connected to external UART TX |
| 3 | 37 | GPIO23 | Connected to external UART RX |
| 4 | 8 | GPIO32 | Connected to uFR Reader reset |
| 5 | X | X | Connected to GND |

| Input/Output pins - connected external P5 connector | | | |
|---|------------------|--------|-----------------------------|
| P5 Pin number | ESP32 Pin number | GPIO | Description |
| 1 | 4 | GPIO36 | External input pin 1 |
| 2 | 5 | GPIO39 | External input pin 2 |
| 3 | 9 | GPIO33 | External input/output pin 3 |
| 4 | 29 | GPIO5 | External input/output pin 4 |
| 5 | 30 | GPIO18 | External input/output pin 5 |
| 6 | 24 | GPIO2 | External output pin 6 |

Input/Output pins additional features

In table below is shown list of additional features available for Input/Output pins on OEM unlocked uFR Online.

| Input/Output pins - additional features | |
|---|---|
| P5 Pin number | List of features |
| 1 | Deep sleep wake-up, ADC |
| 2 | Deep sleep wake-up, ADC |
| 3 | Deep sleep wake-up, ADC, Touch sensor, PWM, I2C |
| 4 | PWM, I2C |
| 5 | PWM, I2C |
| 6 | Deep sleep wake-up, ADC, Touch sensor, PWM, I2C |

Non-programmable pins

In table below is shown list of pins that are internally connected and not user programmable pins on OEM unlocked uFR Online.

| External P4 connector. Only available on UART TTL version without USB connector | |
|--|--------------------------|
| P4 Pin number | Description |
| 1 | External 5V power supply |
| 2 | UART TX Pin |
| 3 | UART RX Pin |
| 4 | UART RTS Pin |
| 5 | GND |
| 6 | UART DTR Pin |

External P2 connector. Only available on Ethernet version with dedicated LAN adapter.

Revision history

| Date | Version | Comment |
|------------|---------|---------------|
| 2019-07-15 | 1.0 | Base document |